

Cyber-physical Systems for Emergency Response

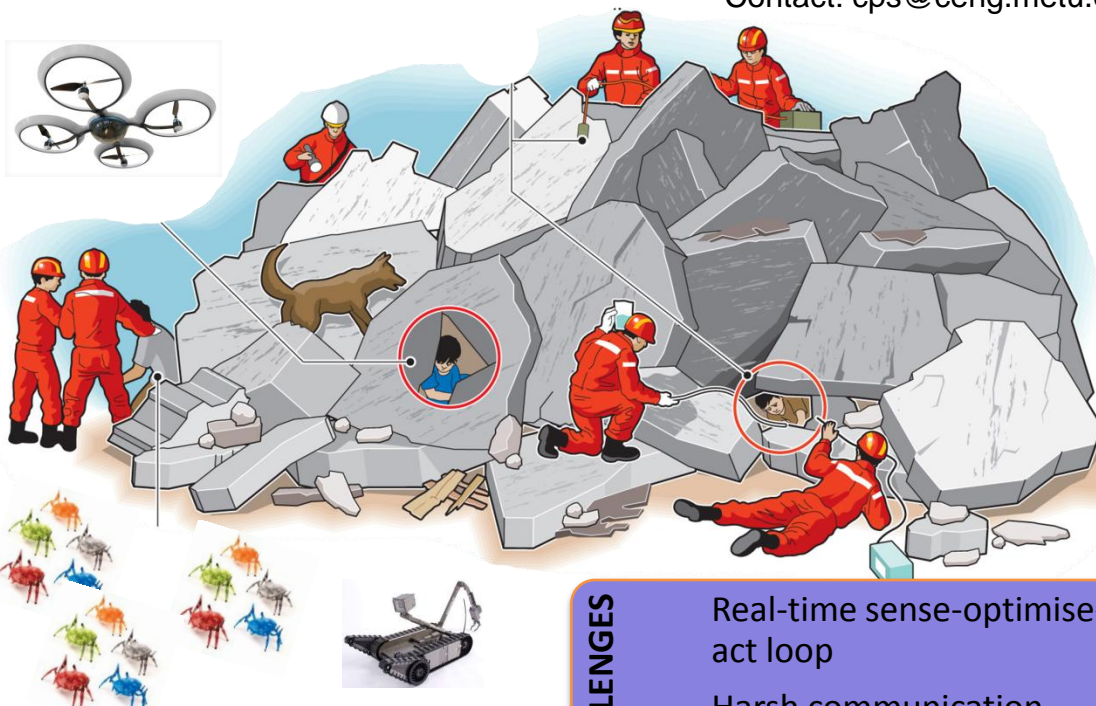
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Rescue Swarm Robotics
for autonomous collection
and fusion of information
for situation awareness



CHALLENGES

- Real-time sense-optimize-act loop
- Harsh communication channels
- Resilient swarm intelligence
- Heterogeneity
- Group mobility

SoA

Heavy-weight rescue robotics

GOAL

Resilient Trustworthy Cyber-physical Systems (RTCPS) for emergency response

Tiny, lightweight, in-rubble, on-rubble, underground, underwater and aerial rescue swarm robotics

Resource management and planning for urban search and rescue (workflow)